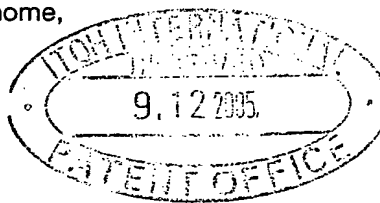


PATENT COOPERATION TREATY

From the
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

To:

ITOH, Tadahiko;
32nd Floor, Yebisu Garden Place
Tower, 20-3, Ebisu 4-chome,
Shibuya-ki, Tokyo
1506032
JAPON



PCT

NOTIFICATION OF TRANSMITTAL OF THE INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(PCT Rule 71.1)

Date of mailing
(day/month/year)

09.09.2005

Applicant's or agent's file reference
TY04001PCT

IMPORTANT NOTIFICATION

International application No.
PCT/JP2004/006706

International filing date (day/month/year)
12.05.2004

Priority date (day/month/year)
25.06.2003

Applicant
TOYOTA JIDOSHA KABUSHIKI KAISHA ET AL

1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary report on patentability and its annexes, if any, established on the international application.
2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.
3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.
4. **REMINDER**

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices) (Article 39(1)) (see also the reminder sent by the International Bureau with Form PCT/IB/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary report on patentability. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guide.

The applicant's attention is drawn to Article 33(5), which provides that the criteria of novelty, inventive step and industrial applicability described in Article 33(2) to (4) merely serve the purposes of international preliminary examination and that "any Contracting State may apply additional or different criteria for the purposes of deciding whether, in that State, the claimed inventions is patentable or not" (see also Article 27(5)). Such additional criteria may relate, for example, to exemptions from patentability, requirements for enabling disclosure, clarity and support for the claims.

Name and mailing address of the international
preliminary examining authority:



European Patent Office - P.B. 5818 Patentlaan 2
NL-2280 HV Rijswijk - Pays Bas
Tel. +31 70 340 - 2040 Tx: 31 651 epo nl
Fax: +31 70 340 - 3016

Authorized Officer

De Jager, R

Tel. +31 70 340-3390



PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|---|---------------------|-------------------------------------|-----------|----------------------|--------------------------|------------|----------|--------------------------|-------------|--|--------------------------|------------|----------------------------|-------------------------------------|-----------|---|--------------------------|------------|-------------------------|--------------------------|-------------|--|--------------------------|--------------|---|
| Applicant's or agent's file reference TY04001PCT | FOR FURTHER ACTION | | See Form PCT/PEA416 | | | | | | | | | | | | | | | | | | | | | | | | |
| International application No. PCT/JP2004/006706 | International filing date (day/month/year) 12.05.2004 | Priority date (day/month/year) 25.06.2003 | | | | | | | | | | | | | | | | | | | | | | | | | |
| International Patent Classification (IPC) or national classification and IPC B60K7/00 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Applicant TOYOTA JIDOSHA KABUSHIKI KAISHA ET AL | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <ol style="list-style-type: none"> 1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36. 2. This REPORT consists of a total of 5 sheets, including this cover sheet. 3. This report is also accompanied by ANNEXES, comprising: <ol style="list-style-type: none"> a. <input checked="" type="checkbox"/> sent to the applicant and to the International Bureau) a total of 2 sheets, as follows: <ul style="list-style-type: none"> <input checked="" type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions). <input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box. b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions). | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <ol style="list-style-type: none"> 4. This report contains indications relating to the following items: <table style="width: 100%; border: none;"> <tr> <td style="width: 10%;"><input checked="" type="checkbox"/></td> <td style="width: 15%;">Box No. I</td> <td>Basis of the opinion</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. II</td> <td>Priority</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. III</td> <td>Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. IV</td> <td>Lack of unity of invention</td> </tr> <tr> <td><input checked="" type="checkbox"/></td> <td>Box No. V</td> <td>Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. VI</td> <td>Certain documents cited</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. VII</td> <td>Certain defects in the international application</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. VIII</td> <td>Certain observations on the international application</td> </tr> </table> | | | | <input checked="" type="checkbox"/> | Box No. I | Basis of the opinion | <input type="checkbox"/> | Box No. II | Priority | <input type="checkbox"/> | Box No. III | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability | <input type="checkbox"/> | Box No. IV | Lack of unity of invention | <input checked="" type="checkbox"/> | Box No. V | Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement | <input type="checkbox"/> | Box No. VI | Certain documents cited | <input type="checkbox"/> | Box No. VII | Certain defects in the international application | <input type="checkbox"/> | Box No. VIII | Certain observations on the international application |
| <input checked="" type="checkbox"/> | Box No. I | Basis of the opinion | | | | | | | | | | | | | | | | | | | | | | | | | |
| <input type="checkbox"/> | Box No. II | Priority | | | | | | | | | | | | | | | | | | | | | | | | | |
| <input type="checkbox"/> | Box No. III | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability | | | | | | | | | | | | | | | | | | | | | | | | | |
| <input type="checkbox"/> | Box No. IV | Lack of unity of invention | | | | | | | | | | | | | | | | | | | | | | | | | |
| <input checked="" type="checkbox"/> | Box No. V | Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement | | | | | | | | | | | | | | | | | | | | | | | | | |
| <input type="checkbox"/> | Box No. VI | Certain documents cited | | | | | | | | | | | | | | | | | | | | | | | | | |
| <input type="checkbox"/> | Box No. VII | Certain defects in the international application | | | | | | | | | | | | | | | | | | | | | | | | | |
| <input type="checkbox"/> | Box No. VIII | Certain observations on the international application | | | | | | | | | | | | | | | | | | | | | | | | | |
| Date of submission of the demand 06.12.2004 | | Date of completion of this report 09.09.2005 | | | | | | | | | | | | | | | | | | | | | | | | | |
| Name and mailing address of the international preliminary examining authority: <div style="display: flex; align-items: center;"> <div> European Patent Office - P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Tx: 31 651 epo nl Fax: +31 70 340 - 3016 </div> </div> | | Authorized Officer Schultze, Y Telephone No. +31 70 340-1092 | | | | | | | | | | | | | | | | | | | | | | | | | |



**INTERNATIONAL PRELIMINARY REPORT
ON PATENTABILITY**

10/559762

International application No.
PCT/JP2004/006706

IAPC REGISTRATION 07 DEC 2005

Box No. I Basis of the report

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language , which is the language of a translation furnished for the purposes of:
- ☐ international search (under Rules 12.3 and 23.1(b))
 - ☐ publication of the international application (under Rule 12.4)
 - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)
2. With regard to the **elements*** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report):*

Description, Pages

1-13 as originally filed

Claims, Numbers

1-5 as amended (together with any statement) under Art. 19 PCT

Drawings, Sheets

1/2-2/2 as originally filed

- ☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing
3. ☐ The amendments have resulted in the cancellation of:
- ☐ the description, pages
 - ☐ the claims, Nos.
 - ☐ the drawings, sheets/figs
 - ☐ the sequence listing (*specify*):
 - ☐ any table(s) related to sequence listing (*specify*):
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages
 - ☐ the claims, Nos.
 - ☐ the drawings, sheets/figs
 - ☐ the sequence listing (*specify*):
 - ☐ any table(s) related to sequence listing (*specify*):

* If item 4 applies, some or all of these sheets may be marked "superseded."

**INTERNATIONAL PRELIMINARY REPORT
ON PATENTABILITY**

International application No.
PCT/JP2004/006706

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

| | | |
|-------------------------------|-------------|-------|
| Novelty (N) | Yes: Claims | 3,5 |
| | No: Claims | 1,2,4 |
| Inventive step (IS) | Yes: Claims | |
| | No: Claims | 1-5 |
| Industrial applicability (IA) | Yes: Claims | 1-5 |
| | No: Claims | |

2. Citations and explanations (Rule 70.7):

see separate sheet

**INTERNATIONAL PRELIMINARY
REPORT ON PATENTABILITY
(SEPARATE SHEET)**

International application No.

PCT/JP2004/006706

Re Item V

**Reasoned statement with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement**

1. Reference is made to the following document:

D1: WO 02/083446 A (NAGAYA GO ; BRIDGESTONE CORP (JP)) 24 October
2002 (2002-10-24)

2. The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claims 1, 2 and 4 is not new in the sense of Article 33(2) PCT.

2.1. The document D1 discloses (the references in parentheses applying to this document):

A suspension system for a vehicle comprising:

an outer rotor type motor having a stator (3S) provided on a outer surface of a cylindrical member (3a) that defines space open to at least an inboard side of the vehicle, and a rotor (3R) rotatably supported by the cylindrical member (3a), wherein the outer rotor type motor is provided within a wheel (2) and the rotor (3R) of the outer rotor is connected to the wheel (2); and a suspension arm (6a, 6b) whose mounting portion is provided on an inner surface of the cylindrical member (figure 1); and
a hub (3b) that is fixed to the wheel in the vicinity of a wheel rim (2b) and is connected to the cylindrical member (3a) via a bearing (3j) that allows relative rotation between the cylindrical member (3a) and the wheel (2)(figure 1).

The subject-matter of claim 1 is not new in the sense of Article 33(2) PCT.

2.2. Document D1 also the additional features of dependent claims 2 and 4.

3. Dependent claims 3 and 5 do not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect of inventive step, the reasons being as follows:

- The feature "...a sealing that is arranged between the cylindrical member and the rotor

and inboard of the rotor..." is a matter of normal design procedure.

A second bearing is disclosed by D1.

- The additional features of claim 5 are merely one of several straightforward possibilities from which the skilled person would select, in accordance with circumstances, without the exercise of inventive skill.

04.10.04

CLAIMS

10/559762

IAP8 Rec'd GPO/PTO 07 DEC 2005

1. (amended) A suspension system for a vehicle, comprising:

5 an outer rotor type motor having a stator provided on an outer surface of a cylindrical member that defines space open to at least an inboard side of the vehicle, and a rotor rotatably supported by the cylindrical member, wherein the outer rotor type motor is
10 provided within a wheel and the rotor of the outer rotor is connected to the wheel;

 a suspension arm whose mounting portion is provided on an inner surface of the cylindrical member; and

15 a hub that is fixed to the wheel in the vicinity of a wheel rim and is connected to the cylindrical member via a bearing that allows relative rotation between the cylindrical member and the wheel.

20 2. (amended) The suspension system as claimed in claim 1, wherein the hub has an annular shape so as to be accommodated between the cylindrical member and the rotor.

25 3. (amended) The suspension system as claimed in claim 1 further comprising:

 a sealing that is arranged between the cylindrical member and the rotor and inboard of the rotor; and

30 a second bearing that is arranged between the cylindrical member and the rotor and adjacent to the sealing.

AMENDED SHEET (ARTICLE 19)

4. The suspension system as claimed in claim 1, wherein connected to the rotor is a brake disk that is disposed such that a disk surface of the brake disk is located within the space defined by the cylindrical member.

5

5. (new) The suspension system as claimed in claim 4, wherein the brake disk is bolted to the hub adjacent to the bearing.

PCT/JP2004/06706

AMENDED CLAIMS

[received by the International Bureau on 04 October 2004 (04.10.2004);
original claims 1, 2 and 3 amended; new claim 5 added; remaining claim
unchanged (2 pages)]